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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,394	09/12/2000	Tsunemori Yoshida		6909

7590 05/22/2003
Felix J D'Ambrosio
Jones Tullar & Cooper PC
P O Box 2266 Eads Station
Arlington, VA 22202

EXAMINER

WEINER, LAURA S

ART UNIT	PAPER NUMBER
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1745

12

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/660,394	YOSHIDA, TSUNEMORI	
	Examiner	Art Unit	
	Laura S Weiner	1745	

-- **Th MAILING DATE of this communication app ars on the cover sh t with th correspond nc address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 8-10 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-10, 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction[^] filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

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DETAILED ACTION

Response to Amendment

1. Examiner acknowledges the cancellation of claims 5, 11-12 cited in Amendment B dated 5-8-03. Examiner acknowledges the cancellation of claims 6-7 cited in Amendment A dated 6-3-2002. Claims 1-4, 8-10, 13-15 have been examined on their merits.

Response to Arguments

2. Applicant's arguments filed 5-8-03 have been fully considered but they are not persuasive.

The rejection of claims 1-2, 8-9, 13-15 remain rejected under 35 U.S.C. 102(e) as being anticipated by Braun et al. (6,180,275) because Braun et al. teaches a composition containing 45-95 wt% graphite powder [85-97 wt%], 5-50 wt% polymer resin [3-15 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon nanofiber and teaches that the graphite powder has an average particle size of 23-26 μm [15-125 μm]. Braun et al. also teaches that the composition is formed into a composite having a desired geometry by compression molding, injection molding or a combination. In the case of compression molding, the graphite and polymer powders are blended together and compressed using a pressure of 5-100 $(10)^6$ N/m², and put under a pressure of 1-15 $(10)^6$ N/m² (cold-molded, 1-15 MPa) [teaching cold-molded at 2-10 MPa] then the

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pressure was increased to $5-75 (10)^6$ N/m² (*molded member pressure, 5-75 MPa*)[*teaching molding at 20-50 MPa*]. Then the mold is cooled to a temperature in the range of 80-250 degrees C [*150-170 degrees C*]. Therefore, Braun et al. teaches all the claimed composition and pressure limitations and method steps. Braun et al. teaches the claimed pressure amounts.

With respect to the product by process claims 1-2, the determination of patentability is based upon the product itself not upon the method of its production. *In re Thrope* 227 USPQ 964; *In re Brown* 173 USPQ 685; *In re Bridgeford* 149 USPQ 55; *In re Wertheim* 191 USPQ 90. Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the Examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to the Applicants to establish that their product is patentably distinct. *In re Brown* 173 USPQ 685 and *In re Fessmann* 180 USPQ 324.

The rejection of claims 1, 3-4, 8, 10 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-8 of copending Application No. 09/660,291 remains because of the reasons stated below. Applicant argues that 09/660,291 is a completely different structure. The Examiner disagrees. Copending application 09/660,291 claims the same fuel cell separator having overlapping composition ratios having a graphite powder with an average diameter of 15-125 um, cold-molding at a pressure of 2-10 MPa and then molding with a pressure of 10-100 MPa.

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Claim Rejections - 35 USC § 102

3. Claims 1-2, 8-9, 13-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Braun et al. (6,180,275).

Braun et al. teaches in column 5, lines 43-49, a composition containing 45-95 wt% graphite powder [85-97 wt%], 5-50 wt% polymer resin [3-15 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon nanofiber. Braun et al. teaches in column 4, lines 66-67, that the graphite powder has an average particle size of 23-26 μm [15-125 μm]. Braun et al. teaches in column 5, line 50 to column 6, line 4, that the composition is formed into a composite having a desired geometry by compression molding, injection molding or a combination. In the case of compression molding, the graphite and polymer powders are blended together and compressed using a pressure of 5-100 $(10)^6$ N/m², and put under a pressure of 1-15 $(10)^6$ N/m² (1-15 MPa)[claim: cold-molded 2-10 MPa] then the pressure was increased to 5-75 $(10)^6$ N/m² (5-75 MPa)[claim: molded at a pressure of 10-100 MPa]. Then the mold is cooled to a temperature in the range of 80-250 degrees C [150-170 degrees C]. Braun et al. teaches in column 2, lines 65-67, that the polymer can be phenolic, a polyester, etc.

Claim Rejections - 35 USC § 103

4. Claims 1-2 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Braun et al. (6,180,275).

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Braun et al. teaches in column 5, lines 43-49, a composition containing 45-95 wt% graphite powder [85-97 wt%], 5-50 wt% polymer resin [3-15 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon nanofiber. Braun et al. teaches in column 4, lines 66-67, that the graphite powder has an average particle size of 23-26 μm [15-125 μm]. Braun et al. teaches in column 5, line 50 to column 6, line 4, that the composition is formed into a composite having a desired geometry by compression molding, injection molding or a combination. In the case of compression molding, the graphite and polymer powders are blended together and compressed using a pressure of 5-100 $(10)^6$ N/m² (5-100 MPa), and put under a pressure of 1-15 $(10)^6$ N/m² (cold-molded, 1-15 MPa) then the pressure was increased to 5-75 $(10)^6$ N/m² (molded member pressure, 5-75 MPa). Then the mold is cooled to a temperature in the range of 80-250 degrees C [150-170 degrees C]. Braun et al. teaches in column 2, lines 65-67, that the polymer can be phenolic, a polyester, etc.

In the event any differences can be shown for the product of the product by process claims 1-2 and 5, as opposed to the product taught by Braun et al., such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. *In re Thrope* 227 USPQ 964; (Fed. Cir. 1985).

With respect to the product by process claims 1-2 and 5, the determination of patentability is based upon the product itself not upon the method of its production. *In re Thrope* 227 USPQ 964; *In re Brown* 173 USPQ 685; *In re Bridgeford* 149 USPQ 55; *In re Wertheim* 191

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USPQ 90. Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the Examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to the Applicants to establish that their product is patentably distinct. *In re Brown 173 USPQ 685 and In re Fessmann 180 USPQ 324.*

5. Claims 3-4, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun et al. (6,180,275) in view of Uemura et al. (4,737,421).

Braun et al. teaches a composition containing 45-95 wt% graphite powder [60-90 wt%], 5-50 wt% polymer resin [10-40 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon nanofiber. Braun et al. teaches in column 4, lines 66-67, that the graphite powder has an average particle size of 23-26 um [15-125 um]. Braun et al. teaches in column 2, lines 65-67, that the polymer can be phenolic, a polyester, etc.

Braun et al. teaches the claimed invention expert does not teach that the graphite powder had a average particle diameter of 40-100 um.

Uemura et al. teaches in column 7, lines 31-60, Examples 4 and 5, a fuel cell separator comprising a separator comprising fibrous cellulose, graphite powder, 44 um or less and a phenol resin.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a graphite powder with a diameter of 44 um or less because Uemura et al. teaches this is known in a separator composition comprising a phenol resin and since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Double Patenting

6. Claims 1, 3-4, 8, 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-8 of copending Application No. 09/660,291. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application 09/660,291 claims the same fuel cell separator having overlapping composition ratios having a graphite powder with an average diameter of 15-125 um, cold-molding at a pressure of 2-20 MPa and then molding with a pressure of 10-100 MPa.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

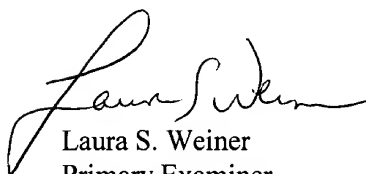
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Weiner whose telephone number is (703) 308-4396. The examiner works a flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (703) 308-2383. The fax phone number for non-after finals is 703-872-9310 and the fax phone number for after-finals is 703-872-9311.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in cursive script, appearing to read "Laura S. Weiner".

Laura S. Weiner
Primary Examiner
Art Unit 1745
May 21, 2003